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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/750,618	12/31/2003	Kenichi Kazama	KON-1712A (Div)	8941
20311 7590 01/09/2007 LUCAS & MERCANTI, LLP 475 PARK AVENUE SOUTH 15TH FLOOR NEW YORK, NY 10016			EXAMINER LAMBELET, LAWRENCE EMILE	
			ART UNIT	PAPER NUMBER
			1732	
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		01/09/2007	PAPER	

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

10/750,618

Applicant(s)

KAZAMA ET AL.

Examiner

Lawrence Lambelet

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 31 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 15-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 15-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 17-18 and 20 are rejected under 35 U.S.C. 102(e) as being Tachibana et al by U.S. Patent 6731357).

Tachibana et al, hereinafter "Tachibana", discloses a process for making a 20-60  $\mu$ m cellulose ester film reading on claim 17. Tachibana teaches providing a dope composition and casting it onto a belt casting apparatus to form a web. See lines 20-50 in column 7 and 10-13 in column 8. Tachibana further teaches peeling the web from the belt and transporting it to a drying section to form a dry film before winding on a roll. See lines 55-65 in column 1. Tachibana still further teaches that the web tension in the peel-to-dryer section is 14 Kg/m, as required by claims 17 and 18. See lines 25-40 in column 10.

Tachibana teaches that the transport device is guide rollers, as required by claim 20. See Fig. 3.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 19 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tachibana as applied to claims 17-18, and 20 above, and further in view of Helgersen et al (U.S. Patent 5,558,206).

Tachibana teaches the method of claims 17-18 and 20, as discussed above.

Tachibana does not explicitly teach a distance of 2-90 m between a peel position and a tension device, as required by claim 19. It would have been obvious to one of ordinary skill, however, given the spatial distribution of rollers illustrated in Fig. 3, that a roller driven in a manner to tension the web could be positioned at any of the positions as drawn, and that such a positioning would have a virtual certainty of falling within such a broad range as that of 2-90m.

Tachibana does not teach use of tendency rollers, as required by claim 21.

Helgersen et al, hereinafter "Helgersen", teaches use of slip rollers having a tendency to rotate in slip friction relationship with a sleeve. See lines 24-30 in column 5.

Tachibana and Helgersen are combinable because they are concerned with a similar technical field, namely, conveyor technology. One of ordinary skill in the art at the time of the invention would have found it obvious to include the slip-roller configuration taught by Helgersen in the web conveyance means of Tachibana. The

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motivation to do so would have been to closely control web tension by not creating drag.

See lines 28-32 in column 10 of Tachibana.

Claims 15-16 and 26-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tachibana, and further in view Goto (U.S. Patent Application Publication 2002/0039707).

As required by claim 15, Tachibana teaches providing a dope composition and casting it onto a belt casting apparatus to form a web. See lines 20-50 in column 7 and 10-13 in column 8. Tachibana further teaches peeling the web from the belt and transporting it to a drying section to form a dry film before winding on a roll. See lines 55-65 in column 1.

Tachibana does not teach a residual solvent content of  $\leq 0.05\%$ , as required by claim 15, or  $\leq 0.04\%$ , as required by claim 26, or  $\leq 0.02\%$  as required by claim 27.

Goto teaches a drying time for the web processing of cellulose esters of up to 1-30 minutes and a drying temperature of preferably 90-190° C. See paragraph [0111]. Examiner suggests that the claimed features necessarily flow from these combined teachings. Evidence of this position can be found in applicant's disclosure on pages 15 and 16 of the instant application, wherein a preferable residual solvent content, defined as between 0.02-0.05% wt, can be obtained by an effective combination of drying time, recited as 5-30 minutes, and drying temperature, recited as 100-200° C.

Claim 16 requires that the residual solvent content in a traverse web direction be no lower than 0.02% from the maximum, which can be no more than 0.05%. It would

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have been obvious to one of ordinary skill that such a small difference on such a critical measurement would have been in the range of measurement error of a standard technique.

Tachibana and Goto are combinable because they are concerned with a similar technical field, namely, cellulosic film processing. One of ordinary skill in the art at the time of the invention would have found it obvious to include the drying parameters in the film processing method of Tachibana. The motivation to do so would have been to reduce wrinkles by eliminating unevenness in web density. See lines 12-17 in column 2 of Tachibana and paragraph [0008] of Goto.

Claims 22-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tachibana in view of Knoop (U.S. Patent 4,664,859), and further in view of Roerty et al (U.S. Patent 5,862,946).

As required by claim 22, Tachibana teaches providing a dope composition and casting it onto a belt casting apparatus to form a web. See lines 20-50 in column 7 and 10-13 in column 8. Tachibana further teaches peeling the web from the belt and transporting it to a drying section to form a dry film before winding on a roll. See lines 55-65 in column 1. Tachibana still further teaches preparing the dope by mixing with an organic solvent. See lines 20-25 in column 7. Tachibana still further teaches heating the dissolution mixture under pressure (in a sealed vessel) to above the boiling (BP) of the solvent.

Tachibana does not teach unsealing the mixture for  $\geq 6$  minutes and resealing it thereafter, as required by claim 22.

Knoop teaches venting a polymer solution to degass it after heating while taking care to process the degassed solution within a closed system closed to atmospheric exposure, effectively within a sealed environment. See lines 5-55 in column 7.

Tachibana and Knoop are combinable because they are concerned with a similar technical field, namely, solvent casting. One of ordinary skill in the art at the time of the invention would have found it obvious to include the atmospheric restriction as taught by Knoop in the dissolution method of Tachibana. The motivation to do so would have been to eliminate air bubbles. See lines 43-50 in column 7 of Knoop.

Tachibana/Knoop do not teach reheating the mixture to above the solvent boiling point after venting, as required by claims 22 and 24, and retaining it thereafter at pressure, as required by claim 24.

Roerty et al, hereinafter "Roerty", teaches that a gas phase is more readily dissolved in a liquid phase when under pressure. See lines 55-60 in column 4. It would have been obvious to one of ordinary skill that a second heating to above the boiling point in a sealed environment would create the pressure necessary to dissolve any remaining entrained gas, thereby removing the potential for any residual bubble formation.

Because the solution is ultimately delivered to the die in a degassed state without further exposure to air, and under influence of pressure, there will be no bubbles in the casting, as required by claims 23 and 25.

Tachibana/Knoop and Roerty are combinable because they are concerned with a similar technical field, namely, solvent casting. One of ordinary skill in the art at the time of the invention would have found it obvious to include the pressure dissolution teaching of Roerty in the casting method of Tachibana/Knoop. The motivation to do so would have been to eliminate bubble formation in the film. See lines 43-50 in column 7 of Knoop.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following document is cited to further show the state of the art with regard to cellulose ester film for liquid crystal display:

U.S. Patent Application Publication 2004/0080693 to Kuzuhara et al

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lawrence Lambelet whose telephone number is 571-272-1713. The examiner can normally be reached on 8 am-4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christina Johnson can be reached on 571-272-1176. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LEL  
12/21/2006

  
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SUPERVISORY PATENT EXAMINER  
1/3/07